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Regulations

and

Courses of Study

for the

Agricultural Departments

of the

High School at Essex, and the Collegiate
Institutes at Galt, Collingwood,
Lindsay, Perth, and
Morrisburg.

Session of 1908-1909.

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AGRICULTURAL DEPARTMENTS IN HIGH SCHOOLS AND COLLEGIATE INSTITUTES.

REGULATIONS FOR SEPT., 1908, TO JULY, 1909.

ADMISSION REQUIREMENTS.

1. Pupils who take the regular two years' Special Course in Agriculture or a partial course therein in a High School, shall be admitted in accordance with the regulations that govern the admission of other High School pupils. For 1908 to 1909, however, other pupils may be admitted who, in the opinion of the Principal of the School and the Public School Inspector, are competent to take up the work. All such pupils shall be regarded as regularly enrolled.

2. To the courses held throughout the county, such persons may be admitted as, in the judgment of the teacher of Agriculture, are competent for the work, whether, for example, farmers or farmers' sons or daughters, or pupils of Public Schools or of other High Schools. A list thereof and their reported attendance shall be kept by the Principal of the school; but they shall not be enrolled as regular High School pupils unless they have been admitted to a High School as provided above.

QUALIFICATIONS OF TEACHERS.

3. The teacher of Agriculture in a High School shall hold the degree of B.S.A. from the University of Toronto, or a certificate of qualification from the Ontario Agricultural College. Such teachers may also take part in the Science work of the school at the discretion of the Principal, provided such work does not in any way interfere with their special work as teachers of Agriculture.

DUTIES OF TEACHERS.

4. Like the other members of the High School staff, the teacher of Agriculture shall be generally subject to the authority of the Board and Principal of the High School, the latter of whom shall control his timetable and have the general direction of his movements.

5. With a view to bringing the Department of Agriculture into closer touch with the farming community and of making it more directly beneficial to them, the teacher of Agriculture shall also act as the local agent of the Department of Agriculture for the district, as follows:—

(a) He shall visit from time to time the various parts of the county and report upon their special requirements.

(b) He shall take charge of an office situated in the High School district, where he may meet the farmers, giving them aid and advice,

supplying them with the bulletins of the Department of Agriculture and such other farm literature as may be useful, and discussing with them the latest experimental results of the work of the Ontario Agricultural College.

(c) He shall keep in touch with local Agricultural Associations, Farmers' Institutes, etc., and shall act in concert with the staff of lecturers, demonstrators, and professors of the Ontario Agricultural College.

(d) Where practicable, he will arrange for excursions for students and others to the Agricultural College in the month of June, and shall take special charge during such visits of those who have been in attendance on his classes.

(e) He shall attend the Winter Fair and annual meeting of the Experimental Union, held yearly in Guelph for one week in December.

ACCOMMODATIONS AND EQUIPMENT.

6. A suitable Laboratory and the Equipment necessary to carry out the work as outlined under Chemistry, Physics, and Biology.

Experimental Grounds, separate from the ordinary School Grounds, for illustration purposes in the growing of various classes of farm crops and training in experimental work. The area of the Grounds will be determined by local conditions; one acre might be sufficient.

A list of suitable equipment from which Boards may select has been prepared and may be obtained on application to the Education Department.

INSPECTION.

7. The Agricultural Department of each High School or Collegiate Institute shall be inspected at least once each year by an officer of the Ontario Agricultural College deputed for this purpose by the Minister of Education. This officer shall report to both the Department of Education and the Department of Agriculture.

COURSES OF STUDY.

8. The regular Special Course in Agriculture in a High School shall be the two years' one, as defined below. Partial courses may also be provided in the High School for regular High School pupils or for such occasional pupils as may desire them.

9. Regular High School pupils taking the special course in Agriculture shall take in addition the subjects which are obligatory upon all High School pupils, namely, Geography, Arithmetic and Mensuration, English Grammar, Writing, Reading, English Composition, English Literature, and History, with such suitable modifications of this course, and with such additional subjects, as may be deemed expedient by the Principal and the parent or guardian of the pupil. [See Reg. 39, (4) and (6), of 1904.]

10. It is not intended that all the work outlined in the course below shall be covered in two years. The outline is suggestive rather than obligatory, and the amount of work to be taken up shall be determined by the needs of the community, and the nature of the special subjects

selected. In some districts, Horticultural subjects, for example, will receive special emphasis; in others, Dairying, and, in others again, Stock raising, and so on.

11. In addition to the regular Special High School Course, partial courses shall be provided, when needed, in the High School and in other parts of the county, of such duration and character as may meet the needs of the farming community. These may include short courses in Horticulture; Soils, Seeds, Weeds; Farm dairying, Poultry keeping, etc., as well as demonstrations and lectures in particular subjects (Stock judging, Seed judging, etc.) at one or more meetings at suitable centres. In these courses the teacher of Agriculture will be assisted, when necessary, by members of the staff of the Ontario Agricultural College, and he will be supplied by the College with abundant material for demonstration purposes.

12. High School pupils who take the two years' Special Course herein provided, and whose competency is attested by the Principal of the school and the teacher of Agriculture, shall be eligible for entrance to the Second Year work of the Ontario Agricultural College.

13. The following is the regular two years' Special Course, to be organized in accordance with the requirements of each locality:

(1) *Field Husbandry*.—History of agriculture; different systems of farming; different kinds of soil; rotation of crops; farm crops in their relation to drainage; application of manures; green manuring; preparation of the land for the different crops; methods of cleaning, testing, and selecting farm seeds; study of cereals, roots, fodder crops, grasses, clovers, and other farm crops; sowing, harvesting, preserving, marketing.

Experimental grounds near the school will be used for illustrative experiments with varieties of cereals, grasses, root crops, and in seed selection, methods of cultivation, rotation of crops, and the use of various kinds of fertilizers.

(2) *Animal Husbandry*.—A study of the history and characteristics of the principal breeds of live stock, including light and heavy horses, beef and dairy cattle, sheep, and swine; feeding and management; principles of breeding; registration of pedigrees; market requirements.

Visits to local farms, and practical work in judging stock.

(3) *Dairy Husbandry*.—The herd; formation, care, and management of a dairy herd, rearing of calves; dairy stables: lighting, cleaning and ventilating; individual cow records. The milk: care of milk, elementary chemical and bacteriological study of milk. The home dairy: running of hand separators and care of dairy utensils; manufacture, packing, and marketing of butter.

Visits to local creameries and cheese factories, and a study of factory methods of manufacture, packing, and marketing.

(4) *Poultry*.—The most valuable breeds and varieties of hens, ducks, geese and turkeys, their characteristic points and peculiarities; various methods of housing poultry; incubation, brooding, and rearing of chickens; general methods of feeding and management; market conditions; the fattening and dressing of poultry for home and foreign markets.

(5) *Horticulture*.—Treatment of fruit plantations : cultivation, grafting, spraying ; value of cover crops ; methods of growing and caring for vegetables ; selection of varieties ; study of insect and fungus diseases affecting fruits and vegetables ; care, storing, and marketing of fruit.

(6) *Forestry*.—Forestry as related to the farm ; classification of the common forest trees ; the establishment, care and protection of the woodlot ; varieties and methods for roadside planting and shelter belts.

(7) *Agricultural Botany*.—Identification and eradication of weeds and weed seeds ; Seed Control Act and its application ; experiments to show seed germination and growth of plants ; the relation of plants to soil, air, light, temperature, and moisture ; systematic study of the structure of cereals, grasses, legumes, and roots ; plant diseases : smut, rust, mildew, etc. ; how to recognize and combat them ; collecting, pressing, and mounting of weeds, grasses ; weed seeds for samples in identification.

(8) *Entomology*.—A practical course in economic insects, identification, habits, and life histories ; a close study of the more important insects, by means of breeding and rearing cages ; insecticides ; collecting of injurious and beneficial insects and samples of their work.

(9) *Agricultural Physics*.—Soil : classification and physical examination, origin, and mode of formation ; soil forming, soil forming rocks and minerals ; behaviour towards moisture. Surveying and drainage : measurement of fields and farms with the chain ; calculating areas and drawing plans ; use of various instruments for determining levels, preparing plans for drainage ; methods of digging, laying of tile, and filling of trench ; calculations concerning required size of tile and cost of various systems. Conservation of moisture by drainage, mulching, and cultivation ; capillarity and its relation to plant growth. Water capacity of different soils. Mechanics : principles of farm machinery ; principles of ventilation, lighting and heating.

(10) *Agricultural Chemistry*.—Chemical composition of soils ; elements used by plants ; availability and assimilation of plant food in the soil ; application of fertilizers ; absorption and retention of important constituents, as nitrogen, phosphoric acid, and potash ; insecticides and fungicides ; their composition and proper mixture.
